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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHANKONG, DOHM	
ART UNIT	**PAPER NUMBER**
2152	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/844,759	GARCIA-LUNA-ACEVES ET AL.	
	Examiner	Art Unit	
	Dohm Chankong	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,6-12 and 15-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6-12 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/16/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1> This action is in response to Applicant's request for continued examination. Claims 1, 7, and 10 are amended. Claims 18-20 are canceled. Claims 1, 2, 6-12, and 15-17 are presented for further examination.

2> This is a non-final rejection.

Continued Examination Under 37 CFR 1.114

3> A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10.16.2007 has been entered.

Response to Arguments

4> Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection necessitated by Applicant's amendment.

Claim Objections

5> Claims 15 and 17 are objected to because of the following informalities: They claim dependency on canceled claim 14. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6> Claims 1, 2, 6-12, 15 and 16 are rejected under 35 U.S.C §103(a) as being unpatentable over McCanne et al, U.S Patent No. 6.415.323 ["McCanne"], in view of Yamano, U.S Patent No. 6.314.088, in further view of an Kraft, U.S Patent No. 6.529.939.

7> As to claim 1, McCanne discloses a method comprising:

receiving a first request for an information object at an anycast address, wherein the request is received at an information object repository selected according to specified performance metrics [column 11 «lines 58-59» | column 15 «line 67» to column 16 «line 8» : *a client submits a request to the ARN, where the ARN advertises an anycast address* | column 19 «lines 15-17»] by mapping an address of a client to one or more addresses of information object repositories using a Web Information Locator by Distance (WILD) protocol that runs on top of a Transmission Control Protocol (TCP) [column 16 «lines 13-17» : *McCanne describes using a local monitoring protocol to map a client to another information object repository by utilizing the protocol to determine the candidate service node based on load and availability information; this functionality corresponds to the claimed WILD protocol* | column 17 «lines 45-47» :

McCanne does not expressly disclose that the monitoring protocol "runs on top" of TCP however such a feature is implied from McCanne's disclosure. McCanne discloses utilizing TCP to connect to service nodes within the network (column 15, lines 1-6). McCanne additionally discloses that the ARN performs the service node selection protocol over the network. Therefore, one of ordinary skill in the art would have reasonably inferred that the local monitoring protocol is run on top of TCP (see also, column 19, lines 11-13)];

resolving the first request to a corresponding unicast network address for the information object, wherein the resolving includes transmitting a second request for the corresponding unicast network address [column 15 «lines 61-65» | column 16 «lines 17-26» where : *McCanne discloses that the ARN initiates a "dialogue" with a service node S. In response, the service node returns "information to the ARN that is required to properly redirect C to S." It would have clear to one of ordinary skill in the art that the "dialogue" corresponds to the claimed second request. One of ordinary skill in the art would also understand that the returned information corresponds to a unicast network address as it would be required to redirect the client to the service node*], wherein the second request is a single IP packet having the anycast network address [column 16 «lines 52-53» : service request to the anycast address A. This teaching implies that the request has the anycast network address]; and

returning the anycast resolution response in response to the second request , the anycast resolution response is a single IP packet having the corresponding unicast network address [column 10 «lines 40-43» | column 16 «lines 17-29» : a redirection message that directs a client to a "normally-addressed and routed (unicast) service node"].

McCanne does not explicitly disclose two limitations: (1) waiting for an anycast resolution response to the second request for a predetermined time and returning a failure message if the response to the second request is not received within the predetermined time; and (2) instructing the information object repository to obtain a copy of the information object at the corresponding unicast address.

With respect to (1), while McCanne does disclose transmitting a second request for a corresponding unicast address, McCanne does not disclose the waiting feature as claimed, such a feature was well known in the art at the time of Applicant's invention. For example, Kraft discloses updating the client about the failure of an information request when a response to the request is not received within a certain timeout period [column 3 «lines 25-37]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement this failure message utility into McCanne's information object repository to keep the clients informed that their request for information could not be handled at the specified unicast address and to signal to the user to reconnect to the service after losing the connection [see Kraft, column 3 «lines 38-60»].

While Kraft is not directed to anycast or address resolution requests, the functionality of waiting for a timeout period and providing error messages when a response is not received during the period is well known functionality that would be applicable to any type of request or addressing protocol. Within McCanne's system, Kraft's error message capability would enable the ARN to inform clients that a service node has not responded within a certain timeout period.

With respect to (2) McCanne does disclose that the repository is capable of servicing the clients' requests directly but does not explicitly disclose obtaining a copy at the corresponding unicast address [column 14 «lines 27-32» | column 16 «lines 3-11»]. Yamano discloses a repository (that receives an request for an object at an anycast address) that obtains a copy of the requested information object at a corresponding unicast address [Figure 5 | column 1 «lines 21-30» | column 4 «lines 30-36» | column 5 «line 64» to column 6 «line 15» where : Yamano's configuration server node 11 retrieves the object requested by the client from another server node's ATM address (unicast)]. Therefore Yamano teaches that a repository, that acts as a redirector such as one seen in McCanne, can also retrieve content from other repositories within the network. One of ordinary skill in the art would have been able to incorporate Yamano's functionalities into McCanne's repository (redirector) to allow the repository to retrieve content from other repositories at the corresponding unicast address to be able to directly service the request in the future. Since McCanne already teaches that his repository can directly handle content requests, implementing Yamano's teaching would only enhance McCanne's capabilities.

8> As to claim 2, McCanne discloses the method of claim 1 further comprising returning the unicast address for the information object [column 10 «lines 35-43»].

9> As to claim 6, McCanne discloses the method of claim 5 wherein the performance metrics comprise one or more of: reliability of a path from the selected information object repository, available bandwidth in said path, average delay from the selected information

object repository to a source of the request, average processing delay at the selected information object repository and loads on the selected information object repository [column 17 «lines 45-46» | column 18 «lines 64-67» : monitors load characteristics].

10› As to claims 7 and 10, as they do not teach or further define over the prior art references, they are similarly rejected for at least the same reasons set forth for claim 1.

11› As to claim 8, McCanne discloses the information object repository of claim 7 being further configured to resolve the network layer anycast address by transmitting a request for the network layer unicast address and awaiting a response thereto [column 11 ‹lines 24-36 and lines 58-65›, column 12 ‹lines 16-24› and column 13 ‹lines 35-42›].

12› As to claim 9, McCanne discloses the information object repository of claim 7 to monitor if the request for the network layer unicast address is not received within a timeout period [column 13 ‹lines 35-36›] but does not specifically disclose that a failure message is sent to the source of the request for the information object.

Kraft discloses updating the client about the failure of an information request when a response to the request is not received within a certain timeout period [column 3 «lines 25-37]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement this failure message utility into McCanne's information object repository to keep the clients informed that their request for information could not be

handled at the specified unicast address and to signal to the user to reconnect to the service after losing the connection [see Kraft, column 3 «lines 38-60»].

13› Claim 11 is a network that contains the information object repository of claim 8. Therefore claim 11 is rejected for the same reasons as set forth in above paragraph 12 for claim 8.

14› Claim 12 is a network that contains the information object repository of claim 9. Therefore claim 12 is rejected for the same reasons as set forth in above paragraphs 18 and 19 for claim 9.

15› As to claim 15, McCanne discloses the network of claim 14 wherein the response to the request for the network layer unicast address is returned by a host having the network layer unicast address [column 16 ‹lines 18-26› where: 'S" is the host with the network layer unicast address].

16› As to claim 16, McCanne discloses the request is received at an information object repository selected without regard as to whether the information object is actually stored at the information object repository [column 8 «lines 14-23» | column 11 «lines 58-62» where : McCanne stresses that the only requirement for directing a client to a service node is that the node is the closest to the client; therefore, the implication is that there is no regard as to whether or not the content is on the service node].

17> Claim 17 is rejected under 35 U.S.C §103(a) as being unpatentable over McCanne, Yamano, and Kraft in view of McCanne, U.S Patent No. 6.611.872 ["McCanne.2"].

18> As to claim 17, McCanne does not disclose the single IP packet comprising the request for the network layer unicast address and the single IP packet comprising the response to the request for the network layer unicast address further comprise an IP header and a UDP header.

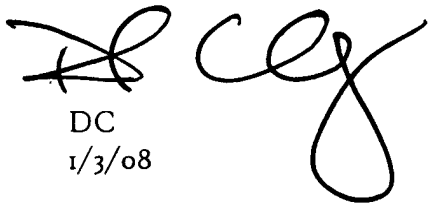
However, in the same field of invention, McCanne.2 discloses that the single IP packet comprising the request for the network layer unicast address and the single IP packet comprising the response to the request for the network layer unicast address further comprise an IP header and a UDP header [Figure 6 «items 204, 210, 220» (where overlay header is in UDP format) | column 4 «lines 54-56» | column 30 «lines 30-41» where : the packets sent through the network all have an IP header and a UDP overlay header]. It would have been obvious to one of ordinary skill in the art to modify McCanne's packets to include both IP and UDP headers as taught by McCanne.2. The benefits of incorporating both protocol headers into a packet enable "clients to connect to overlay routers using unicast UDP or TCP through a redirection and location service" [McCanne.2, column 4 «lines 3-8»]. Note that McCanne is directed towards providing a redirection and location service [abstract].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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